



Desktop Product Standards <small>ONLY THE ONLINE SYSTEM HAS THE CURRENT VERSION. VERIFY COPY AGAINST THE ONLINE SYSTEM BEFORE USE.</small>	Document #	VITA – DCS - 0004
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GENERAL

Name	Personal Computer Hardware Product Standards		
Description	Documentation of vendor hardware offerings		
Purpose	Business Requirements for PC hardware standards		
Document Owner	Steve Radabaugh	Owner Org	Desktop Computing Services

VERSION HISTORY

Version	Date	Author	Template	Change Summary
Draft1.0	2006/11/20	Steve Radabaugh	VITA-TEMP-0001	Initial release.
Draft1.1	2006/12/21	Monty Frahm		Added Optional Accessories.
Draft1.2	2007/03/22	Ric Anderson		Minor edits with no content change. Removed "Draft."
Final1.0	2007/04/02	Monty Frahm		Final documentation.

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1 Personal Computer Document Overview

The hardware and software requirements are outlined below as defined in attachment 10.1.1.3 of the Comprehensive Infrastructure Agreement.

The Personal Computer systems are classified a “Standard” and “Premium” for desktop and laptop computers. There is only a “Standard” configuration for the tablet offering. All hardware will meet or exceed the requirements for its respective category.

1.1 Effective Date

The product standards and guidance described in this document are in effect as of January 1, 2006.

1.2 Purpose

To communicate product standards and guidance to engineering and support staff for design of solutions for Desktop Computing Services.

Audience: VITA/NG Partnership Current Operations customer support staff.

1.3 Guidance

This document provides technical standards for meeting current and future requirements for customer Desktop Computing Services. The list of configurations described herein will be deployed as part of the VITA/NG partnership solution during the major transformation of the enterprise.

Prior beginning the larger effort to transform the customer's environment, customer requirements may drive more immediate need for system changes or refreshes. It is important to develop solutions to today's problems that are aligned with the target architecture that will result from service transformation projects.

By conforming solutions to the planned architecture, the Commonwealth will benefit from:

- Reduced risk of interruption to the customers' business/mission
- Leveraged short term investments that can contribute to complete transformation
- Standardized environments across the Commonwealth's Enterprise
- Leveraged training and support resources across the environment.

All requests for services and hardware must conform to the standard configurations in this document.

Requests for exceptions to this standard must provide full documentation of system requirements and justification as to why the compliance cannot be achieved.



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1.4 Procedure

These product standards herein are to be used to guide customer solution design. Compliance to the standard should not be construed as final acceptance. All requests for services must be submitted using the current P2P process. Each request will require approval prior to procurement and deployment.

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2 Standard Desktop Offerings

The following is the generic specifications for “Standard” desktop offering:

Standard Desktop Configuration
Intel Pentium D processor
Intel Q963 Express Chipset
Intel Graphics Media Accelerator 3000
1GB DDR2-533 SDRAM minimum
80GB SATA minimum
CDRW/DVDRom combo drive
Vista Capable
2 Front facing USB ports minimum
TPM 1.2

2.1 HP Standard Desktop Offering

The following is the HP specific Standard desktop offering:

- **VITA Mainstream Desktop - DC5700 CTO**
- HP Compaq dc5700 SFF Base Unit
- Standard PowerSupply-dc5 SFF Chassis Kit
- Microsoft Windows XP Pro Software
- Intel Pentium D 915 Processor
- 1GB PC2-5300 (DDR2-667) 2x512 Memory
- 80GB SATA 3.0Gb/s 1st Hard Drive
- HP PS/2 Standard Keyboard
- HP PS/2 2-Button Scroll Mouse
- 48X/32X Combo - SATA Drive
- Intel Pro 1000 PT Gigabit PCIe LP NIC Ca
- L1740 TFT 17" 1280 x 1024 - DVI, VGA
- HP dc5700 SFF (3-3-3) Warranty
- HP dc5700 Country Kit
- Thermal SFF Kit
- HP 5y NBD**/Disk Retention DT Only SVC.



2.2 Optional Equipment for Standard Desktop Offerings

- Desktop Optional Accessories:
 - Standard Monitor Stand – Part# PA507
 - L1940T 19" LCD Monitor – Part# EM869AA#ABA
 - External USB Floppy Drive – Part# TBD
 - HP Tower Stand – Converts desktop to tower – Part# PS797A.

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3 Premium Desktop Offerings

The following is the generic specifications for “Premium” desktop offering:

Premium Desktop Configuration
Intel Core 2 Duo processor
Intel 965Q Express Chipset
Discreet Graphics
Additional Memory
Additional HD Storage
DVD+ /R+RW/CD-R/RW
Vista Premium Capable
2 Front facing USB ports minimum
TPM 1.2

3.1 HP Premium Desktop Offering

- **VITA DC7700 vPro CTO**
- HP dc7700 Small Form Factor Base Unit
- HP PSU 240 watt E-Star 3.0 SFF Chassis
- Microsoft Windows XP Pro OS
- Core2 Duo E6600 (2.40/1066/4M) Processor
- HP 2GB PC2-6400 (DDR2-800) 2x1GB Memory
- HP 250GB SATA 3.0Gb/s (1st) Hard Drive
- NVIDIA Quadro NVS 285 128MB DH PCIe Card
- HP PS/2 Standard Keyboard
- HP PS/2 2-Button Scroll Mouse
- HP 16X DVD+/-RW (LS/DL) SATA Drive
- HP No Floppy SFF Drive
- Intel Pro 1000 PT Gigabit PCIe LP NIC
- Intel vPro-IAMT Ready Business Platform
- L1940T 19" LCD Monitor
- HP 3-3-3 dc7700 SFF/ST Warranty
- HP dc7700 Country Kit
- HP dc7700 SFF Thermal Kit
- HP 5y NBD**/Disk Retention DT Only SVC.



3.2 Optional Equipment for Premium Desktop Offerings

- Desktop Optional Accessories:
 - Standard Monitor Stand – Part# PA507A
 - L1740 TFT 17" 1280 x 1024 – DVI, VGA – Part# PL766AA#ABA
 - External USB Floppy Drive – Part# TBD
 - HP Tower Stand – Converts desktop to tower – Part# PS797A.

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4 Standard Laptop Offerings

The following is the generic specifications for “Standard” laptop offering:

Standard Laptop Configuration
Intel Core Duo processor
Intel 945GM Express Chipset
Intel Graphics Media Accelerator 950
1GB DDR2-533 SDRAM minimum
60GB SATA minimum
CDRW/DVDRom combo drive
Vista Capable
Integrated 802.11 wireless
TPM 1.2

4.1 HP Standard Laptop Offering

The following is the HP specific Standard desktop offering:

- **VITA Mainstream Laptop CTO**
- HP Compaq nc6400 IDS UMA Base Unit
- Windows XP Pro nc6400 O/S
- Intel Core Duo T2400 nc6400 Processor
- 14.1 WXGA nc6400 4 Wire Display
- 1024M 533DDR2 2DM nc6400 Memory Module
- 60G 5400RPM FX nc6400 Hard Drive
- 6 Cell 55Whr nc6400 Battery
- DualPoint nc6400 Keyboard
- 56K V92 MDC nc6400 Modem
- 802.11b/g US/CAN nc6400 Wireless Card
- Combo DVD/CDRW MBII nc6400 Drive
- 3/3/0 nc6400 US Warranty
- 65w AC nc6400 Hardware Kit
- Pentium-M DC Label
- MS XP Logo-2 Label
- Laptop Bag
- HP 4y NBD Onsite/Disk Retention NB SVC.





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4.2 Optional Equipment for Standard Laptop Offerings

- Laptop Productivity - USB Bundle
 - Docking Station 1.1 – Part# EN488AA#ABA
 - 2004 Standard Keyboard USB US – Part# DT528A#ABA
 - USB 2-Button Optical Mouse – Part# DC172B.
- Laptop Productivity - PS2 Bundle
 - Docking Station 1.1 – Part# EN488AA#ABA
 - 2004 Standard Keyboard PS/2 – Part# DT527A#ABA
 - PS/2 2-Button Optical Mouse – Part# EY703AA.
- Laptop Optional Accessories
 - Docking Station 1.1 – Part# EN488AA#ABA
 - Standard Monitor Stand – Part# PA507A
 - PS/2 2-Button Optical Scroll Mouse – Part# EY703AA
 - USB 2-Button Optical Scroll Mouse – Part# DC172B
 - 2004 Standard Keyboard PS/2 – Part# DT527A#ABA
 - 2004 Standard Keyboard USB - Part# DT528A#ABA
 - L1740 TFT 17" 1280 x 1024 - DVI, VGA – Part# PL766AA#ABA
 - L1940T 19" LCD Monitor – Part# EM869AA#ABA
 - Li-Ion 8-Cell HP Extended Life Battery – Part# PB993A
 - 65W Smart AC Adapter US – Part# ED494AA
 - HP MultiBay 1.44-MB Diskette Drive for Notebooks – Part# DC362A.

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5 Premium Laptop Offerings

The following is the generic specifications for “Premium” laptop offering:

Premium Laptop Configuration
Intel Core Duo processor
Intel 945GM Express Chipset
Discreet Graphics
Additional Memory
Additional HD Storage
DVD+/R+RW/CD-R/RW
Vista Premium Capable
Integrated 802.11 wireless
TPM 1.2

5.1 HP Premium Laptop Offering

- **VITA Premium Laptop - nc8430 CTO**
- HP Compaq IDS 256M nc8430 Base Unit
- Windows XP Pro nc8430 O/S
- Intel Core Duo T2500 nc8430 Processor
- 15.4 WXGA n8400 Display
- 2048M 667DDR2 2DM n8400 Memory Module
- 80G 5400RPM FX n8400 Hard Drive
- DVD RW SM DL FX n8400 Drive
- DualPoint n8400 Keyboard
- 8 Cell 68Whr n8400 Battery
- Fingerprint Reader n8400 Module
- 56K MDC n8400 Modem
- 802.11b/g US/CAN n8400 Wireless Card
- 3/3/0 nc8430 US Warranty
- Pentium-M DC Label
- MS XP Logo-2 Label
- FPR RTF Card
- HP n8400 Hardware Kit
- Laptop Bag
- HP 4y NBD Onsite/Disk Retention NB SVC.





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5.2 Optional Equipment for Premium Laptop Offerings

- Laptop Productivity - USB Bundle
 - Docking Station 1.1 – Part# EN488AA#ABA
 - 2004 Standard Keyboard USB US – Part# DT528A#ABA
 - USB 2-Button Optical Mouse – Part# DC172B.
- Laptop Productivity - PS2 Bundle
 - Docking Station 1.1 – Part# EN488AA#ABA
 - 2004 Standard Keyboard PS/2 – Part# DT527A#ABA
 - PS/2 2-Button Optical Mouse – Part# EY703AA.
- Laptop Optional Accessories
 - Docking Station 1.1 – Part# EN488AA#ABA
 - Standard Monitor Stand – Part# PA507A
 - PS/2 2-Button Optical Scroll Mouse – Part# EY703AA
 - USB 2-Button Optical Scroll Mouse – Part# DC172B
 - 2004 Standard Keyboard PS/2 – Part# DT527A#ABA
 - 2004 Standard Keyboard USB - Part# DT528A#ABA
 - L1740 TFT 17" 1280 x 1024 - DVI, VGA – Part# PL766AA#ABA
 - L1940T 19" LCD Monitor – Part# EM869AA#ABA
 - Li-Ion 8-Cell HP Extended Life Battery – Part# PB993A
 - 65W Smart AC Adapter US – Part# ED494AA
 - HP MultiBay 1.44-MB Diskette Drive for Notebooks – Part# DC362A.

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6 Standard Tablet Offering

The following is the generic specifications for “Standard” tablet offering:

Standard Tablet Configuration
Convertible Laptop
Intel Core Duo
Intel 945GM Express
Intel 950 Integrated Graphics Controller
1GB SDRAM
60GB
DVD/CDRW
802.11

6.1 HP Standard Tablet Offering

VITA Tablet CTO

- HP Compaq IDS tc4400 Base Unit
- Windows XP Tablet tc4400 O/S
- Intel Core Duo T2300E tc4400 Processor
- 12.1 XGA WVA tc4400 Display
- 1024MB 533 DDR2 2DM 4400 Memory Module
- 60G 5400RPM FX 4400 Hard Drive
- DualPoint 4400 Keyboard
- 6 Cell 55Whr 4400 Battery
- 56K MDC tc4400 Modem
- Broadcom 802.11b/g tc4400 US Card
- 3/3/0 tc4400 US Warranty
- DIB Combo DVD/CD-RW Drive MultiBay II
- DIB Multibay II Cradle
- 65W 4400 Hardware Kit
- Pentium-M DC Label
- MS XP Logo-2 Label
- Laptop Bag
- HP 4y NBD Onsite/Disk Retention NB SVC.





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6.2 Optional Equipment for Standard Tablet Offerings

- Tablet Productivity - USB Bundle
 - Docking Station 1.1 – Part# EN488AA#ABA
 - 2004 Standard Keyboard USB US – Part# DT528A#ABA
 - USB 2-Button Optical Mouse – Part# DC172B.
- Tablet Productivity - PS2 Bundle
 - Docking Station 1.1 – Part# EN488AA#ABA
 - 2004 Standard Keyboard PS/2 – Part# DT527A#ABA
 - PS/2 2-Button Optical Mouse – Part# EY703AA.
- Tablet Optional Accessories
 - Docking Station 1.1 – Part# EN488AA#ABA
 - Standard Monitor Stand – Part# PA507A
 - PS/2 2-Button Optical Scroll Mouse – Part# EY703AA
 - USB 2-Button Optical Scroll Mouse – Part# DC172B
 - 2004 Standard Keyboard PS/2 – Part# DT527A#ABA
 - 2004 Standard Keyboard USB - Part# DT528A#ABA
 - L1740 TFT 17" 1280 x 1024 - DVI, VGA – Part# PL766AA#ABA
 - L1940T 19" LCD Monitor – Part# EM869AA#ABA
 - Li-Ion 8-Cell HP Extended Life Battery – Part# PB993A
 - 65W Smart AC Adapter US – Part# ED494AA
 - HP MultiBay 1.44-MB Diskette Drive for Notebooks – Part# DC362A.



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7 Printer Document Overview

The hardware and software requirements are outlined below as defined in attachment 10.1.1.3 of the Comprehensive Infrastructure Agreement.

Printers are classified as small monochrome, medium monochrome, large monochrome, color, small multifunction, and large multifunction.

There are two copier sizes, medium and large.

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8 Printer Offerings

8.1 Standard Monochrome Printer offering

HP LaserJet 3005dn Printer (Q5959A)

Standard monochrome printer



Speed	
Print speed, black (best quality mode)	Up to 35 ppm
Print quality / technology	
Print technology	Technology: Laser
Print quality, black	Up to 1200 x 1200 dpi
Paper handling / media	
Paper trays, std.	2
Paper trays, max.	3
Input capacity, std.	Up to 600 sheets
Input capacity, max.	Up to 1100 sheets
Standard envelope capacity	Up to 10 envelopes
Envelope feeder	No
Output capacity, std.	Up to 250 sheets
Output capacity, max.	Up to 250 sheets
Duplex printing (printing on both sides of paper)	Automatic (standard)
Paper Handling, Input (standard)	100-sheet multipurpose tray, 500-sheet input tray, automatic duplex printing
Paper Handling, Input (optional)	Optional third 500-sheet paper tray



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Paper Handling, Output (standard)	250-sheet output bin, 100-sheet rear output bin
Media sizes, std.	Letter, legal, 8.5 x 13 in, executive, envelopes
Media sizes, custom	Multipurpose Tray: 3 x 5 to 8.5 x 14 in
Media types	Paper (bond, color, letterhead, plain, preprinted, pre-punched, recycled, rough), envelopes, labels, cardstock, transparencies, user-defined
Memory / print languages	
Memory, std.	80 MB
Hard disk	None
Print languages, std.	HP PCL 6, HP PCL 5e, HP PostScript Level 3 emulation, direct PDF printing v 1.4 (with at least 128 MB of printer memory)
Typefaces	PCL: 103 internal font set (plus Greek, Hebrew, Cyrillic, Arabic); PS: 93 internal font set (plus Greek, Hebrew, Cyrillic, Arabic)
monthly page volume	
Recommended monthly page volume	1500 to 5000 pages
Monthly volume (duty cycle):	Up to 100000 pages
Connectivity	
Connectivity, std.	Hi-Speed USB port (compatible with USB 2.0 specifications), 1 open EIO slot, HP Jetdirect fast Ethernet embedded print server
Connectivity, opt.	HP Jetdirect EIO internal print servers, HP Jetdirect external print servers, HP wireless print servers
Print drivers, std.	HP PCL 6, HP PCL 5e, HP PostScript Level 3 emulation, Macintosh PPDs
Dimensions / weight / warranty	
Dimensions (w x d x h)	16.7 x 30.7 x 12.2 in
Weight, U.S.	35.7 lb



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Warranty, std.	One-year warranty, return to HP authorized service center
What's in the box	
What's in the box	HP LaserJet P3005dn Printer (includes built-in automatic two-sided printing and HP Jetdirect Fast Ethernet embedded print server), power cord, control panel overlay (included only when needed to change the language on the control panel for a country/region), print cartridge, software and documentation on CD-ROM, Getting Start Guide, support flyer

8.1.1 Optional Equipment for Standard Monochrome Printer offering

TBD

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8.2 Medium Monochrome Printer offering

HP LaserJet 4250tn Printer (Q5402A)

Medium monochrome printer



Speed/monthly volume	
Print speed, black (best quality mode)	Up to 45 ppm
Monthly volume:	Up to 200000 pages
Print quality / technology	
Print technology	Laser
Print quality, black	Up to 1200 x 1200 dpi
Paper handling / media	
Paper trays, std.	3
Paper trays, max.	5
Input capacity, std.	Up to 1100 sheets
Input capacity, max.	Up to 3100 sheets
Standard envelope capacity	Up to 10 envelopes
Envelope feeder	Yes, 75
Output capacity, std.	Up to 300 sheets
Output capacity, max.	Up to 800 sheets
Duplex printing (printing on both sides of paper)	Automatic (optional)
Paper Handling, Input (standard)	100-sheet multipurpose tray, two 500-sheet input trays
Paper Handling,	500-sheet or 1500-sheet input tray (up to 2 additional trays for up to 3100-



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Input (optional)	sheet input capacity), two-sided printing accessory, 75-envelope feeder
Paper Handling, Output (standard)	250-sheet output bin, 50-sheet rear output bin, 500-sheet stapler/stacker
Paper Handling, Output (optional)	500-sheet stacker or 15-sheet stapler/500-sheet stacker
Media sizes, std.	Letter, legal, executive, statement, 8.5 x 13 in, envelopes (No. 10, Monarch)
Media sizes, custom	Multipurpose Tray 1: 3 x 5 to 8.5 x 14 in; Tray 2 and 3: 5.8 x 8.3 to 8.5 x 14 in
Media types	Paper (bond, color, letterhead, plain, preprinted, pre-punched, recycled, rough), envelopes, labels, cardstock, transparencies, user-defined

Memory / print languages

Memory, std.	64 MB
Hard disk	Optional, 20 GB HP High-performance EIO hard disk
Print languages, std.	HP PCL 6, HP PCL 5e, HP Postscript Level 3 emulation, direct PDF (v 1.3) printing (with at least 128 MB printer memory)
Typefaces	80 HP font set (plus Greek, Hebrew, Cyrillic, Arabic)

Connectivity

Connectivity, std.	Hi-Speed USB 2.0 port, IEEE 1284-B compliant parallel port, 2 open EIO slots, HP Jetdirect Fast Ethernet Embedded Print Server
Connectivity, opt.	HP Jetdirect EIO internal print servers, HP Jetdirect external print servers, HP wireless print servers, HP Jetdirect EIO connectivity card (for USB, serial, LocalTalk), Bluetooth wireless
Print drivers, std.	HP PCL 6, HP PCL 5e, HP PostScript Level 3 emulation, HP-GL/2

Dimensions / weight / warranty

Dimensions (w x d x h)	16.2 x 41.1 x 26.4 in
Dimensions (w x d x h)	16.2 x 41.1 x 26.4 in
Weight, U.S.	60 lb
Warranty, std.	One-year, return to HP authorized service center warranty

What's in the box



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What's in the box	HP LaserJet 4250tn Printer, right-angle power cord, control panel overlay, print cartridge, software and documentation on CD-ROM, Getting Started Guide, support flyer, HP Jetdirect Fast Ethernet Embedded Print Server, additional 500-sheet input paper tray
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8.2.1 Optional Equipment for Medium Monochrome Printer offering

TBD

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8.3 Large Monochrome Printer offering

HP LaserJet 9050dn Printer (Q3723A)

Large monochrome printer



Speed/monthly volume	
Print speed, black (best quality mode)	Up to 50 ppm
Monthly volume:	Up to 300000 pages
Print quality / technology	
Print technology	Laser
Print quality, black	600 x 600 dpi [with HP FastRes 1200 and Resolution Enhancement technology (REt)]
Paper handling / media	
Paper trays, std.	3
Paper trays, max.	4
Input capacity, std.	Up to 1100 sheets
Input capacity, max.	Up to 3100 sheets
Standard envelope capacity	Up to 10 envelopes
Envelope feeder	No
Output capacity, std.	Up to 600 sheets
Output capacity, max.	Up to 3600 (with optional 3000-sheet stacker or stapler/stacker), up to 2500 (with optional 8-bin mailbox), up to 1600 (with optional multifunction finisher) sheets
Duplex printing (printing on both sides of paper)	Automatic (standard)
Paper Handling, Input (standard)	Two 500-sheet input trays, 100-sheet multipurpose tray, automatic duplex unit
Paper Handling,	2000-sheet input tray



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Input (optional)	
Paper Handling, Output (standard)	600-sheet output bin (500 sheets face down, 100 sheets face up)
Paper Handling, Output (optional)	Optional 3000-sheet stacker (requires 2000-sheet input tray) or optional 3000-sheet stapler/stacker (requires 2000-sheet input tray) or optional multifunction finisher (requires 2000-sheet input tray); optional 8-bin mailbox (requires 2000-sheet input tray)
Media sizes, std.	Letter, legal, tabloid, executive, JPostD, envelopes (No. 10, C5, DL, Monarch, B5)
Media sizes, custom	Multipurpose Tray 1: 3.9 x 7.5 to 12.3 x 18.5 in; automatic two-sided printing unit, Trays 2, 3, 4, 8-bin mailbox: 5.8 x 8.3 to 11.7 x 17 in
Media types	Paper (bond, color, letterhead, plain, preprinted, pre-punched, recycled, rough), labels, cardstock, transparencies
Memory / print languages	
Memory, std.	128 MB
Hard disk	Optional, 20 GB HP High-performance EIO Hard Disk
Print languages, std.	HP PCL 6, HP PCL 5e, HP Postscript Level 3 emulation, direct PDF printing (v 1.3), XHTML-Print v 0.95, HP PDL (Printer Job Language), PML (Printer Management Language)
Typefaces	80 internal TrueType fonts scalable in HP PCL and HP Postscript Level 3 emulation; additional font solutions available via DIMMs
Connectivity	
Connectivity, std.	Bidirectional IEEE 1284-B compliant parallel port, 2 open EIO slots, HP Jetdirect Fast Ethernet Embedded Print Server
Connectivity, opt.	HP Jetdirect EIO internal print servers, HP Jetdirect external print servers, wireless connectivity
Print drivers, std.	HP PCL 5e, HP PCL 6, HP Postscript Level 3 emulation
Dimensions / weight / warranty	
Dimensions (w x d x h)	55 x 42.7 x 40.8 in
Weight, U.S.	168 lb
Warranty, std.	One-year, next business day onsite warranty
What's in the box	



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What's in the box	HP LaserJet 9050dn Printer, 100-sheet multipurpose tray, two 500-sheet input trays, HP Jetdirect Fast Ethernet Embedded Print Server, automatic two-sided printing unit, face-up output bin, power cord, print cartridge, printer documentation, printer software CD-ROM, control panel overlay
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8.3.1 Optional Equipment for Large Monochrome Printer offering

TBD

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8.3 Color Printer offering



HP Color LaserJet 3800dn Printer (Q5983A)

Color laser printer

Speed/monthly volume	
Print speed, black (best quality mode)	Up to 22 ppm
Print speed, color (best quality mode)	Up to 22 ppm
Processor speed	533 MHz
Monthly volume:	Up to 65000 pages
Print quality / technology	
Print technology	Laser
Print quality, black	Up to 600 x 600 dpi
Print quality, color	Up to 600 x 600 dpi
Paper handling / media	
Paper trays, std.	2
Paper trays, max.	3
Input capacity, std.	Up to 350 sheets
Input capacity, max.	Up to 850 sheets
Standard envelope capacity	Up to 10 envelopes
Envelope feeder	No
Output capacity, std.	Up to 200 sheets
Output capacity, max.	Up to 200 sheets



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Duplex printing (printing on both sides of paper)	Automatic (standard)
Media sizes, std.	Letter, legal, 8.5 x 13 in, executive, statement, envelopes (No. 10, Monarch)
Media sizes, custom	Multipurpose tray: 3 x 5 to 8.5 x 14 in; 250-sheet and optional 500-sheet input trays: 5.8 x 8.3 to 8.5 x 14 in
Media types	Paper (plain, preprinted, letterhead, pre-punched, bond, recycled, tough, color, glossy, rough), transparencies, labels, envelopes, cardstock, user-defined
Memory / print languages	
Memory, std.	288 MB
Memory, max.	544 MB
Hard disk	Optional, 20 GB
Print languages, std.	HP PCL 6, HP PCL 5c, HP Postscript Level 3 emulation, direct PDF printing v1.4 (with 128 MB or more memory)
Typefaces	80 HP font set (plus Greek, Hebrew, Cyrillic, Arabic)
Connectivity	
Connectivity, std.	Hi-Speed USB 2.0 port, 1 available EIO slot (for optional network adapters, IEEE 1284B parallel port or hard disk), 1 Host-USB accessory slots, HP Jetdirect Fast Ethernet embedded print server
Connectivity, opt.	Gigabit Ethernet, 802.11b/g wireless LAN and other networking accessories
Macintosh compatible	Yes
Print drivers, std.	HP PCL 6, HP PCL 5e, HP Postscript Level 3 emulation
Dimensions / weight / warranty	
Dimensions (w x d x h)	15.7 x 17.7 x 16.7 in
Weight, U.S.	61.6 lb (includes print cartridge)
Warranty, std.	One-year, next day, onsite limited warranty
Compatible network operating systems	
Network operating systems supported	Windows 98, 2000, XP, XP 64-bit, Server 2003; Novell NetWare 3.2, 4.2, 5.x, 6.x (NDPS); Mac OS 9.1, 9.2, 10.2, 10.3, 10.4; Red Hat Linux 6.x, 7.x; SuSE Linux 6.x; HP-UX 10.20, 11.x; Solaris 2.5x, 2.6, 7, 8 (SPARC systems only); IBM AIX 3.2.5 and higher; MPE-iX; Citrix MetaFrame; Windows Terminal



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	Services (not all protocol and operating system configurations are supported; for more information, go to http://www.hp.com/support/net_printing)
What's in the box	
What's in the box	HP Color LaserJet 3800dn Printer, in-box documentation (Getting Started Guide), software drivers and documentation on CD-ROM, power cable, 100-sheet multipurpose tray, 250-sheet input tray; also includes HP Jetdirect Fast Ethernet embedded print server, automatic two-sided printing and pre-installed, full-capacity 6,000-page black and 6,000-page cyan, magenta, and yellow HP color LaserJet print cartridges with HP ColorSphere Toner (note: all print cartridge page yields are based on five percent page coverage)
Software included	Print drivers and installation software on CD-ROM (HP PCL 6, HP PCL 5e, HP Postscript Level 3 emulation, HP LaserJet Utility, HP Easy Printer Care Software, Macintosh software, PostScript Printer Description)

8.3.1 Optional Equipment for Color Printer offering

TBD

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8.4 Standard Multifunction Printer Offering

HP LaserJet 3390 All-in-One

Standard multifunction printer



Functions	
Functions	Black-and-white printing, black-and-white copying, black-and-white faxing, black-and-white and color scanning
Printer specifications	
Prints colors	No
Print speed, black (normal quality mode)	Up to 22 ppm
Monthly volume:	Up to 10000 pages
Print quality, black	Up to 1200 x 1200 dpi
Print languages, std.	HP PCL 6, HP PCL 5e, HP PostScript Level 3 emulation
Print technology	Laser
Duplex printing (printing on both sides of paper)	Automatic (standard)
Memory, std.	64 MB
Connectivity, std.	Built-in 10/100 wired Ethernet network connectivity with 1 RJ-45 port; Hi-Speed USB (compatible with USB 2.0 specifications) port
General specifications	
Automatic Document Feeder Capacity	Standard, 50 sheets
Paper trays, std.	1 plus single-sheet priority slot.
Paper trays, max.	1 plus single-sheet priority slot.
Input capacity, std.	Paper tray plus up to 251 sheets
Input capacity, max.	Paper tray plus up to 551 sheets



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Output capacity, std.	Up to 125 sheets
Output capacity, max.	Up to 125 sheets
Standard envelope capacity	Up to 10 envelopes
Media types	Paper (bond, color, glossy, heavy, letterhead, light, plain, preprinted, pre-punched, recycled, rough), envelopes, transparencies, labels, cardstock
Media sizes, std.	Media input tray and priority slot: letter, legal, envelopes (No 5 1/2 Baronial through No 11), index cards, postcards; automatic document feeder (ADF): letter, legal
Media sizes, custom	Priority slot: 3 x 5 to 8.5 x 14 in; input tray: 5.8 x 8.3 to 8.5 x 14 in; automatic document feeder (ADF): 5 x 5 to 8.5 x 15 in
Print cartridges	1 (black)
Multitasking capability	Yes
Software included	HP ToolboxFX, HP LaserJet Scan, TWAIN 1.9 or WIA scanner drivers, HP LaserJet Fax, HP Fax Setup Wizard, Readiris PRO text recognition software (not installed with other software, separate installation required), printer drivers (HP PCL 5e, HP PCL 6, HP PostScript Level 3 emulation), installer/uninstaller, HP Director (Macintosh)
Dimensions (w x d x h)	19.5 x 15.7 x 18.5 in
Weight, U.S.	39.1 lb (with toner cartridge)
Warranty, std.	One-year limited warranty
Fax specifications	
Color fax	No
Fax resolution, black (dots per inch)	Up to 300 x 300 dpi (halftone enabled)
Fax transmission speed (seconds per page)	3 sec per page
Fax autore dial	Yes
Fax PC interface	Yes, software included



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Speed dials, maximum number	Up to 120 (119 group dials) numbers Up to 120 (119 group dials)
Fax broadcast	119
Fax forwarding	Yes
Fax auto-reduction	Yes
Junk fax barrier	Yes
Fax delayed sending	Yes
Polling	Yes
Remote retrieval	No
Distinctive ring detection	Yes
Copier specifications	
Copy resolution, black	Up to 600 x 600 dpi
Copy settings	Contrast (lighter/darker), resolution copy quality (draft, text, mixed, film photo and picture), reduce/enlarge 25 to 400%, copy collation, number of copies, paper size, 1 or 2-sided copying
Maximum number of copies	Up to 99 copies
Copy reduce/enlarge settings	25 to 400%
Scanner specifications	
Scanner type	Flatbed, sheet fed scanner
Maximum scan size	8.5 x 11.7 in
Scan resolution, enhanced	Up to 19200 dpi
Scan resolution, hardware	Up to 1200 x 1200 dpi
Bit depth	24-bit
Levels of grayscale	256
What's in the box	



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What's in the box	HP LaserJet 3390 All-in-One, power cord(s), HP LaserJet Q5949A Black Print Cartridge, Getting Started Guide, support flyer, CDs containing device software and electronic User's Guide, control panel faceplate, Readiris PRO text recognition software, ADF input support, phone cord(s)
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8.4.1 Optional Equipment for Standard Multifunction Printer offering

TBD

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8.5 Large Multifunction Printer Offering

HP LaserJet 4345xs mfp (Q3944A)

Large multifunction printer



Functions	
Functions	Black-and-white printing, black-and-white copying, color scan to email, analog faxing, optional digital sending, output stacking, output stapling
Printer specifications	
Prints colors	No
Print speed, black normal quality mode	Up to 45 ppm
First page out, black	Less than 10 seconds
processor speed	533 MHz
Monthly volume:	Up to 200000 pages
Print quality, black	1200 x 1200 dpi (with HP FastRes 1200)
Print languages, std.	HP PCL 6, HP PCL 5e, HP Postscript Level 3 emulation, direct PDF printing (v 1.3), XHTML-Print v 0.95, PML (Printer Management Language)
Print technology	Laser
Duplex printing (printing on both sides of paper)	Automatic (standard)
Memory, std.	256 MB
Memory, max.	512 MB
Connectivity, std.	Bidirectional IEEE-1284-B compliant parallel port, 1 available EIO slot, HP Jetdirect Fast Ethernet Embedded Print Server; Jetlink port for third-party paper handling solutions, Foreign Interface Harness (FIH) connector, RJ-11 fax interface port
Connectivity, opt.	HP Jetdirect EIO internal print servers, HP Jetdirect external print servers, and HP Jetdirect EIO Connectivity Card for USB (compatible with USB 2.0 specifications), serial, and LocalTalk
General specifications	



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Automatic Document Feeder Capacity	Standard, 50 sheets
Paper trays, std.	3
Paper trays, max.	5
Input capacity, std.	Up to 1100 sheets
Input capacity, max.	Up to 2100 sheets
Output capacity, std.	Up to 500 (or 15 packets of 30 pages stapled) sheets
Output capacity, max.	Up to 700 (with 3-bin mailbox), up to 500 (with stapler/stacker) sheets
Standard envelope capacity	Up to 10 envelopes
Media types	Paper (plain, preprinted, letterhead, pre-punched, bond, recycled, color, rough), transparencies, labels, envelopes, card stock
Media sizes, std.	Letter, legal, executive, statement, 8.5 x 13 in, envelopes (No. 10, commercial)
Media sizes, custom	Multipurpose tray, 3-bin mailbox, and stacker element of stapler/stacker: 3 x 5 to 8.5 x 14 in; 500-sheet input Trays 2, 3, 4, 5: 5.8 x 8.3 to 8.5 x 14 in; custom sizes not supported on optional automatic two-sided printing accessory, envelope feeder, or stapler
Media weight, recommended	Multipurpose tray, 3-bin mailbox: 16 to 53 lb; 500-sheet input Trays 2, 3, 4, 5: automatic two-sided printing accessory; stapler/stacker: 16 to 32 lb; optional envelope feeder: 20 to 28 lb
Print cartridges	1 (black)
Multitasking capability	Yes
Software included	Print drivers and installation software on CD-ROM (HP PCL 6, HP PCL 5e, HP Postscript Level 3 emulation, HP LaserJet Utility, HP Toolbox, Macintosh software, PostScript Printer Description)
Dimensions (w x d x h)	36 x 19 x 43.7 in
Weight, U.S.	264 lbs
Warranty, std.	One-year, next business day onsite warranty

Fax specifications



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Color fax	No
Fax transmission speed (seconds per page)	Up to 33.6 kbps
Fax autoreodial	Yes
Fax PC interface	No
Speed dials, maximum number	100 (each can contain 100 numbers)
Fax broadcast	100
Fax forwarding	Yes
Fax auto-reduction	Yes
Junk fax barrier	Yes
Fax delayed sending	No
Polling	Yes
Remote retrieval	No
Distinctive ring detection	No
Copier specifications	
Copy speed, black (copies per minute)	Up to 45 cpm
Copy speed, color (copies per minute)	29 ipm (scan, simplex), 18 ipm (automatic two-sided printing)
Copy resolution, black	600 x 600 dpi
Copy settings	Scalability, contrast, background removal, sharpness, N- or Z- ordering, orientation
Maximum number of copies	999
Copy reduce/enlarge settings	25 to 400%



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Scanner specifications	
Scanner type	Flatbed, automatic document feeder (ADF) scanner
Maximum scan size	8.5 x 11.7 in
Levels of grayscale	256
What's in the box	
What's in the box	HP LaserJet 4345xs mfp, phone cord, 500-sheet input Tray 3, analog fax accessory, Fax Install Guide, stapler/stacker, MFP stand, and all models include: straight power cord, control panel overlay, print cartridge, software and documentation on CD-ROM, information and training CD, in-box documentation (Getting Started Guide, Walk Up Wall Poster, Network Configuration Guide, Telephone Support Flyer)

8.5.1 Optional Equipment for Large Multifunction Printer offering

TBD